

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(s):	Thomas et al.	CONF. NO.	6990
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FILING DATE:	02/27/2004	EXAMINER:	Stephen, Emem O.
TITLE:	EXCHANGEABLE KEYMAT		
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Review is respectfully requested because the combination of references does not teach the claimed limitations.

1. Claims 1, 2, 4-7, 9-12 and 14-19 are patentable under 35 U.S.C. 103(a) over Wu (U.S. Pub. No. 2006/0165465) and Hayes-Pankhurst et al. (U.S. 4,634,818, hereinafter "Hayes"). Claim 1 recites that the bendable elastomeric keymat comprises elastic properties and is configured so that an entirety of the bendable elastomeric keymat bends to force the lips into the plurality of indentations on the cover to attach the edges of the keymat to the cover and that the indentations are located at edges of a recess for removably mounting the keymat. Nowhere does the combination of Wu and Hayes disclose or suggest bending an "entirety" of the "keymat" to "force the lips into the plurality of indentations on the cover" for "removably mounting the keymat" as recited by Applicant.

It is noted that while the key module 12 in Wu is removable from the base module 11, only the tabs 28 of the key module 12 are flexible and act as snaps for holding the key

module 12 within the base module 11 (see Para. [0076]). Thus, there is absolutely no disclosure in Wu that an "entirety" of the key module 12 (or keyboard 800) "bends" to "force the lips into the plurality of indentations on the cover to attach the edges of the keymat to the cover" for "removably mounting the keymat" as acknowledged at page 4, lines 12-13 of the Final Office Action. However, it is asserted by the Examiner that Hayes discloses the above noted features because the "keymat disclosed by Hayes has an elastic property that makes it stretchable, compressible, and bendable for removable mounting" and that "the keymat 15 is of a resiliently deformable material (col. 4, line 65)".

While the keymat 15 of Hayes may be constructed of a resiliently deformable material, the keymat of Hayes is not disclosed such that an "entirety" of the keymat 15 is "bent" to "force the lips into the plurality of indentations on the cover" for "removably mounting the keymat" as recited by Applicant. The keymat 15 in Hayes is disclosed as a moulding in an elastomeric material such as silicon rubber or a rubber-modified polyurethane that when untensioned is of slightly lesser width and length than the circuit board 10. The keymat 15 has an integrally moulded peripheral lip 16 that has at its extremity a depending rim 17. (Col. 2, L. 46-51). Nowhere does Hayes disclose that an "entirety" of the keymat 15 is "bent" to "force the lips into the plurality of indentations on the cover" for "removably mounting the keymat". Rather than being bent to attach the keymat 15 to the circuit board 10 as suggested in the Final Office Action at page 2 in the "Response to Arguments" section, the keymat 15 in Hayes is tensioned or stretched (which, as known to one skilled in the art, tends to pull the material being stretched taught and keeps the material from bending) to attach the keymat 15 to the rigid circuit board 10 (Col. 2, L. 51-54 and L. 59-62). While the extreme edges (which are confined to the lip 16 and rim 17) of the keymat 15 in Hayes may be bent or rolled around the edges of the rigid circuit board 10 to allow the lip 16 and rim 17 to wrap around the edges of the circuit board 10 the "entirety" of the keymat 15 is certainly not "bent" to "force the lips into the plurality of indentations on the cover" due to the stretching and taughtness of the elastomeric material of the keymat 15 and the fact that the keymat 15 is of slightly

lesser width and length than the circuit board 10. It is submitted that this is exactly the opposite of “bending an entirety” of the keymat to “force the lips into the plurality of indentations on the cover to attach the edges of the keymat to the cover” for “removably mounting the keymat” as claimed by Applicant. It is further noted that “bending an entirety” of the keymat 15 in Hayes would effectively decrease the width and length of the keymat 15 making it difficult at best to stretch the keymat so that the dimensions of the keymat 15 are larger than the dimensions of the rigid circuit board 10 for allowing the attachment of the keymat 15 to the circuit board 10, as is required by Hayes. Therefore, because Wu and Hayes, individually do not disclose “bending an entirety” of the keymat to “force the lips into the plurality of indentations on the cover to attach the edges of the keymat to the cover” for “removably mounting the keymat” as recited in Applicant’s claim 1 their combination cannot as well.

Further, it is respectfully submitted that Hayes appears to be cited solely for the proposition of a resiliently deformable keymat 15 without any justifiable reason for combining Wu with Hayes. The reasoning of combining the references “in order to fit the need of the user” is specious at best. Wu discloses a rigid key module 12 that is inserted into a base module 11 and retained by flexible tabs 28 that engage grooves 26 of the base module 11 to form keyboard 10. Hayes on the other hand discloses a keymat 15 that is stretched over a circuit board 10 so that the lip 16 of the keymat 15 engages edges of the circuit board 10. In Hayes the longitudinal and transverse tension of the keymat 15 holds the keymat on the circuit board 10. There is nothing in either Wu or Hayes that would motivate or suggest, to one skilled in the art, combining the references to arrive at what is claimed by Applicant given the completely different modes of operation of the key module 12 of Wu and keymat 15 of Hayes. Further, it would not be obvious to combine the references because neither Wu nor Hayes discloses or suggests that “an entirety of the bendable elastomeric keymat bends to force the lips into the plurality of indentations on the cover to attach the edges of the keymat to the cover” for “removably mounting the keymat” as described above.

Thus, for the above reasons, claim 1 is patentable over the combination of Wu and Hayes. Claims 6, 11 and 17 are patentable over the combination of Wu and Hayes for reasons that are substantially similar to those described above with respect to claim 1. Claims 2, 4, 5, 7, 9, 10, 12, 14-16, 18 and 19 are patentable at least by reason of their respective dependencies.

Further, claim 16 recites that the keymat is moulded in one piece. Figures 3 and 8 of Wu do not show the key module (12) as being moulded in one piece. Rather, as described above, the key module (12) in Wu includes at least a frame and a key cap (15) for each and every single key on the key module (12) (See e.g. Fig. 9). Thus, the key module (12) in Wu is made of at least two pieces (i.e. the frame and a key cap for each of the keys). Nowhere does Wu disclose the key module (12) is moulded in one piece. Therefore, claim 16 is patentable for this additional reason.

2. Claims 3, 8, 13, 18 and 19 are patentable under 35 U.S.C. 103(a) over Wu, Hayes and Kfoury et al., U.S. Pub. No. 2003/0119543 ("Kfoury"). Claims 3, 8, 13, 18 and 19 depend from claims 1, 6, 11 and 17 which are patentable over Wu and Hayes for the reasons described above. It is submitted that because the combination of Wu and Hayes does not disclose or suggest all the features of claims 1, 6, 11 and 17, that the combination of Wu Hayes and Kfoury cannot as well. Thus, claims 3, 8, 13, 18 and 19 are patentable at least by reason of their respective dependencies.

Moreover, the combination of Wu, Hayes and Kfoury does not disclose or suggest that the guiding pieces are arranged in direct connection to one or more of said plurality of lips as recited in Applicant's claim 3. The Examiner acknowledges that the combination of Wu and Hayes does not disclose this feature. However, it is that Kfoury discloses this feature in Figures 4 and 5 and at paragraphs [0032]-[0033].

Figures 4 and 5 and at paragraphs [0032]-[0033] of Kfoury disclose exactly the same thing as Wu in that the input module (200) has left and right rails (418, 416) which engage groove (414) when the input module is inserted into the cavity (402). Wu

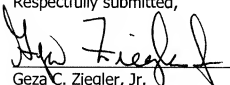
discloses the key module (112) has two opposite side edges (113) for sliding engagement with opposing guide rails (114) formed in an inward rim (115) of the bay (111). When the opposite side edges (113) and opposing guide rails (114) of Wu are compared with the left and right rails (418, 416) and groove (414) of Kfoury it is clear that these features are identical. In both Wu and Kfoury the rails and grooves allow for the input module (200) / key module (112) to be slid into the keycap bay (111) / cavity (402) from a side of the device and nothing more. There is absolutely no disclosure whatsoever that the opposite side edges (113) and opposing guide rails (114) of Wu or the left and right rails (418, 416) and groove (414) of Kfoury "are arranged in direct connection to one or more of said plurality of lips" as recited in Applicant's claim 3.

Therefore, claim 3 is patentable over the combination of Wu, Hayes and Kfoury because their combination does not disclose or suggest that the guiding pieces are arranged in direct connection to one or more of said plurality of lips as recited in Applicant's claim 3. Claims 8 and 13 are patentable over the combination of Wu and Kfoury for reasons that are substantially similar to those described above with respect to claim 3.

Thus, it is respectfully submitted that essential elements needed for a prima facie rejection of Applicant's claims are lacking, and the rejections cannot be sustained.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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